82. A therapeutic agent for stimulating the immune system comprising the peptide of claim 48.

83. The therapeutic agent of claim 82, further comprising interleukin-2.

84. A therapeutic agent for stimulating the immune system comprising the peptide of claim 49.

85. The therapeutic agent of claim 84, further comprising interleukin-2.

86. A therapeutic agent for stimulating the immune system comprising the peptide of claim 50.

87. The therapeutic agent of claim 86, further comprising interleukin-2.

88. A therapeutic agent for stimulating the immune system comprising the peptide of claim 48.

89. The therapeutic agent of claim 88, further comprising interleukin-2.

REMARKS

Claims 12-22 and 25-32 have been cancelled, and claims 42-89 have been added in this application by this amendment. Claims 39-41 were previously cancelled in the Preliminary Amendment filed on June 2, 1998. The Examiner has withdrawn claims 1-11, 23, 24, and 33-38 from consideration. In view of the claims as they now stand, together with the remarks hereunder, the Applicants believe that the claims are in condition for allowance.

Claims 42-46 are each directed to a peptide or protein having lectinic properties and comprising a specific amino acid sequence. Claims 47-51 are each directed to a peptide or protein having lectinic properties, containing an amino acid sequence comprised by a specific amino acid sequence, and recognized by an antibody specific to the specific amino acid sequence. Claims 52 and 53 are each directed to a peptide or protein having lectinic properties and comprising a specific amino acid sequence, wherein the peptide or protein is obtained by a specific method. Claims 53-59 are each directed to a specific method for

obtaining a peptide or protein having lectinic properties and comprising a specific amino acid sequence. Claims 60-89 are each directed to a composition containing a peptide or protein, wherein the peptide or protein has lectinic properties and comprises a specific amino acid sequence, or the protein or peptide has lectinic properties, contains an amino acid sequence comprised by a specific amino acid sequence, and is recognized by an antibody specific to the specific amino acid sequence.

The Examiner's rejections of claims 12, 16, 21 22, 25-27, and 30-32 under 35 U.S.C. §102(b) over Zeng et al. are obviated by cancellation of the claims. The purification procedure of Zeng et al. does not include chromatography on CM-TRISACRYL® to remove contaminating albumin as described in the present specification. Rather, the sarcolectin obtained by the Zeng et al. procedure contains albumin fixed thereon. In fact, the present inventors have demonstrated such albumin fixation on sarcolectin [see, for example, figures 4A and B of the present specification, and in the following two publications submitted in the accompanying Information Disclosure Statement (IDS): Jiang et al. (1999) Biochimie 81:701-707 and Kaba et al. (1999) Biochimie 81:709-715]. Therefore, the sarcolectin of Zeng et al. is different from the present highly purified sarcolectin having a molecular weight of 55 Kd and an amino acid sequence corresponding to that of SEQ ID NO:1.

Zeng et al. actually discloses a sarcolectin having a molecular weight of 66 Kd. As mentioned in the specification (see, for example, page 2, last paragraph), all previously reported attempts to purify sarcolectin resulted in a protein having a molecular weight of 65 Kd. For instance, figure 2 of Zeng et al. identifies a purified sarcolectin of 66 Kd having the same migration pattern as human serum albumin. Thus, Zeng et al. identifies no highly purified peptide of 55 Kd, or fragments thereof, having the claimed lectinic properties.

The Examiner's rejections of claims 12-22 under 35 U.S.C. §102(b) over each of the Glass and Fuchs references are obviated by cancellation of these claims. The peptides or proteins of the present invention must have lectinic properties. The Glass and Fuchs references each disclose a keratin. Keratins are proteins have properties totally different from the properties of sarcolectins. For example, keratins are highly polymerized, water-insoluble, intracellular macromolecules, and therefore cannot be present in serum as can sarcolectins. Keratins are intermediate filaments. Thus, the Glass and Fuchs references do not teach a protein, or a fragment thereof, having lectinic properties, and being in the monomeric form, and, in certain cases, the dimeric form.

The Examiner's rejections of claims 12, 16-22, 31, and 32 under 35 U.S.C. §112, 1st paragraph, are obviated by cancellation of the claims. The peptides or proteins of claims 47-51 are fully enabled by the specification because a skilled artisan would be able to determine, without undue experimentation, which peptide or protein has lectinic properties and can react with the recited antibody.

The Examiner's rejections of claims 12, 13, 15-22, and 25-32 under 35 U.S.C. §112, 2nd paragraph, and objection to claim 31, are obviated by cancellation of the claims. The pending claims do not contain the language the Examiner considered to be indefinite.

The Examiner objected to the IDS filed on July 30, 1998 as failing to comply with 37 C.F.R. §1.98(a)(2). Specifically, the Examiner did not consider references A12 and A13 in this IDS because "[t]he abstract references by the Patent Abstracts of Japan (Glass) were not available in the parent file and was not supplied, therefore, it was not considered." However, reference A12 does not exist, and was cited in the IDS in error. Reference A13 was cited improperly. The Examiner's attention is directed to the accompanying IDS in which reference A13 is resubmitted as references B3 and B4; these references are now properly cited.

The IDS of July 30, 1998 contains two additional errors not noted by the Examiner. Specifically, reference A4 contains two abstracts on one page: WELLENS et al. and KABA et al. The Applicants intended to cite KABA et al. However, WELLENS et al. was cited instead in error. Therefore, the KABA et al. reference is being resubmitted in the accompanying IDS as reference B1; this reference is now properly cited.

Finally, in the IDS of July 30, 1998, reference A5 was cited as being in volume 254 of The Journal of Biological Chemistry. This reference, in fact, is in volume 258 of this journal. Therefore, reference A5 is resubmitted in the accompanying IDS as reference B2; this reference is now properly cited.

The Applicants submit that the present invention is now in condition for allowance. Early notification of such action is courteously solicited.

Respectfully submitted,

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